



Healthy Fruit

Volume 12, 2004

Prepared by the University of Massachusetts Fruit Team

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Current DD accumulations

Location	Base 32 F	Base 43 F
Belchertown, SkyBit E-Weather (01/01/04 – 06/07/04)	--	866
Belchertown, SkyBit E-Weather (04/13/04– 06/07/04)	-- (100*)	--

* % mature scab spores; primary scab season is over

[Orchard Radar for west-central Massachusetts \(Belchertown\)](http://pronewengland.org/content/AllModels/Mamodel/RadarMa-belchertown.htm)

<http://pronewengland.org/content/AllModels/Mamodel/RadarMa-belchertown.htm>

[Orchard Radar for eastern Massachusetts \(Waltham\)](http://pronewengland.org/content/AllModels/Mamodel/RadarMa-waltham.htm)

<http://pronewengland.org/content/AllModels/Mamodel/RadarMa-waltham.htm>

Upcoming meetings/events

Date	Meeting/Event	Location	Time	Information
June 15	Fruit Team Twilight Meeting	OESCO, Inc. (Orchard Equipment) Conway, MA	5:30 P.M.	Jon Clements (413) 478-7219
June 16	Fruit Team Twilight Meeting	Mann Orchard Methuen, MA	5:30 P.M.	Jon Clements (413) 478-7219
June 17	Fruit Team Twilight Meeting	Phantom Farms Cumberland, RI	5:30 P.M.	Heather Faubert (401) 874-2750
July 14	MFGA Summer Meeting	UMass Cold Spring Orchard Belchertown, MA	TBA	Jon Clements (413) 478-7219

Insects

The **plum curculio** model has been moving ever-so slowly towards that threshold of 340 DD (Base 50) from McIntosh petal-fall. At the UMass Cold Spring Orchard in Belchertown, early in the week it totaled nearly 300 DD's. By the end of the week, with warm weather, it will exceed 340. This means you need to maintain insecticide coverage against curculio UNTIL we reach 340 DD's. If you last sprayed 10-14 days ago, insecticide coverage is lapsing and you probably need to spray again. If you sprayed as recently as 7 days ago, you are probably covered. Of course this all applies to the 'average' Massachusetts orchard.

Leafminers are in the tissue-feeding to pupal stage – not a good stage to treat, but a good one to monitor, since the mines are visible on the upper leaf surface. (Mostly on fruit cluster leaves.) The next generation will start showing up in 1-2 weeks. Some parasitism of leafminer pupae is evident.

Otherwise, it is fairly quiet. First generation **codling moth** has started to emerge, but typically the last curculio spray will take care of them. You might want to keep an eye out for **white apple leafhoppers** (WAL) nymphs – if they exceed three per leaf in June, treatment is warranted. Lorsban 4E trunk sprays for both **dogwood borer** and **peachtree borer** can be applied now, but make sure you don't spray fruit or foliage.

Diseases

Although primary **apple scab** season should be over in most of the State, keep an eye out for lesions developing on fruit and foliage. If any are found, it's probably a safe bet to apply Captan at 2 lbs/100 gallons in back-to-back sprays (app. 7 days apart) to control it. This will also control early **flyspeck**.

Horticulture

We often notice 2nd leaf orchards where un-staked trees develop the 'wobbles,' and form a cone-shaped depression around the soil line of the tree. This makes the problem worse, allowing the tree to freely sway in the wind, which inhibits establishment of roots. This problem is observed most often on young (2nd leaf) peach trees. If you have this problem, a couple pounds of pea-stone gravel – available in the concrete mix section of hardware/home stores – piled around the base of the tree will fix this problem.

Bonus articles

Foliar Calcium Benefits in Apple

Win Cowgill, Rutgers Cooperative Extension County Agent
Jeremy Compton, Hunterdon County New Jersey Fruit Grower

It's time to consider adding foliar calcium to your apple cover sprays in fruiting blocks. With the light apple crop in many blocks remaining fruit is more susceptible to calcium deficiencies.

Calcium related disorders such as cork; bitter pit and senescent (internal) breakdown are common in New Jersey. These disorders cut into grower returns by making the affected fruit unsaleable. Some cultivars, such as Jonagold, Cortland, Enterprise (Honeycrisp) and most early season varieties can be highly sensitive to calcium deficiencies in the fruit.

Correction of calcium deficiencies begins with maintaining adequate soil calcium levels through regular liming with high calcium lime only. However soil applied calcium does not easily translocate within the tree, and many factors, such as nutrient imbalance, soil moisture, pH, crop load and pruning may all effect how well the tree utilizes the calcium that is available in the soil. The quickest and most effective short-term corrective treatment for the control of these calcium-related disorders is the implementation of a foliar calcium spray program.

Calcium sprays have been a hot research topic over the past three decades. And, although major advancements have been made in the reduction of calcium related disorders, no universal "cure"

has been found. The most important aspect of a foliar calcium program is the total amount of calcium that ends up in the orchard. Pennsylvania recommends 4 to 14 pounds of total calcium per acre per season, while Massachusetts recommends their growers apply between 21 and 22.5 pounds of actual calcium per season, with up to 10 lb/spray of calcium chloride (CaCl_2) later in the season.

The cooler climate of the New England states allows them to apply such an intensive spray schedule without any significant leaf burn. In work conducted at the Snyder Research Farm over the past 7 years on Enterprise, we have sprayed over 11 pounds of actual calcium per acre per season without any significant leaf burn. Our standard recommendations in New Jersey are to apply 2-3 lb/100 of CaCl_2 per spray before August 1st and 3-5 lb/100 of CaCl_2 per spray after August 1st.

This will allow for sufficient absorption of calcium by the fruit with minimal leaf burn on most cultivars. Research has shown that late season foliar applications of calcium are more effective in reducing calcium related disorders than early season sprays, but total applied calcium by harvest is the most significant factor. Reduced rates of CaCl_2 should be applied if there was no rain between applications, or if we are experiencing hot and humid conditions.

Care should be taken when applications are occurring in temperatures above 80°F. Since foliar applications of calcium do not translocate through the leaves readily, it is important to get thorough spray coverage to allow for calcium to contact the fruit directly. Increased water volume or the addition of a surfactant may provide better coverage and increased absorption while reducing the chance of any leaf injury.

There are many calcium products promoted by industry as substitutes for Calcium Chloride (CaCl_2). Extensive research, however, and comparison of these products has yet to show an advantage over Calcium because it is one of the richest forms of calcium at the cheapest price. Calcium nitrate (CaNO_3) can be substituted for CaCl_2 but only on trees that do not contain low nitrogen levels as measured by leaf analysis. Vigorous trees should not receive Calcium nitrate. Growers opting to use CaNO_3 as their calcium source should be aware that CaNO_3 does not contain as much available calcium as CaCl_2 , so they should adjust their rates accordingly.

Driving Farm Machinery on Public Roads

Are your farm workers experienced in driving farm machinery on public roads? Here are a few tips that you might want to share with them.

Always stop at the end of the driveway or lane and look both ways before pulling onto the road. Switch on the flashing lights. Adjust travel speed to road conditions. Special problems include frost bumps, highroad crowns, soft shoulders and narrow right-of-ways. Signal slow-downs, stops and turns. Avoid sudden maneuvers. Before turning left, watch for cars that might try to pass. Never turn left immediately in front of oncoming traffic.

Extra safety must be taken when pulling loads on public roads. Pull only from the drawbar unless using hitch-mounted equipment. Make sure the hitch is sound and the load secured. Stay away

from ditches and roadside obstacles. Never operate attachments during transport. Keep the PTO lever in neutral.

If possible, move wide equipment during the day and when traffic volume is relatively low. Switch on all lights. If transporting equipment on a flatbed, make sure to comply with local and state highway regulations. Use an escort car or a lookout to help you on blind curves or bridges. Avoid sudden unexpected maneuvers, swerves, stops or turns.

Drive tractors on the shoulder of paved highways, if possible. Do not drive with the tractor and machinery over part of the shoulder and part of the paved lane. If it is not possible to drive on the shoulder, drive on the paved lane. Do not force a line of cars or trucks to stay behind a slow moving tractor or machinery. If a suitable shoulder is available, pull over to permit traffic to pass.

Traffic signs at many rural intersections may be missing, damaged or hidden by vegetation. Always slow and prepare to stop at intersections, narrow bridges and all rural railroad crossings.

BE SEEN! Use flashing warning lights, a legible slow-moving vehicle (SMV) emblem and other lights to see and be seen on public roads. Replace your slow moving vehicle emblem centers every two years. The red reflective borders, for nighttime visibility, often last for seven or more years. The orange fluorescent centers, for daylight visibility, fade and last an average of only two years. Properly position SMV emblems two to six feet above the ground with the point up in the center of the vehicle. The SMV emblem color and shape are visible at a half mile in daylight.

Drive Defensively!

Adapted from University of Maine Extension Bulletin #2310, by D.L. Cyr and S.B. Johnson

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